

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (previously presented) A method to update code in an information storage and retrieval system while that system remains in normal operation, comprising the steps of:

providing an information storage and retrieval system comprising one or more processors;

providing existing code, wherein said one or more processors use said existing code to operate said information storage and retrieval system, and wherein said existing code includes a Concurrent Code Load having (N) phases;

generating a code update image comprising a Temporal Coupling File, wherein said Concurrent Code Load includes instructions to read said Temporal Coupling File;

providing said code update image to said information storage and retrieval system;

executing an (i)th phase of said Concurrent Code Load, wherein (i) is greater than or equal to 1 and less than or equal to (N), and wherein (i) is initially set to 1;

determining if said (i)th phase of said Concurrent Code Load invokes said Temporal Coupling File;

operative if said (i)th phase of said Concurrent Code Load invokes said Temporal Coupling File, reading instructions for said (i)th phase of said Concurrent Code Load from said Temporal Coupling File, and executing said instructions for said (i)th phase of said Concurrent Code Load;

completing said (i)th phase of said Concurrent Code Load;

ascertaining if (i) equals (N);

operative if (i) equals (N), operating said information storage and retrieval system using said code update.

2. (original) The method of claim 1, further comprising the steps of:

operative if (i) does not equals (N):

incrementing (i);

repeating said executing, determining, completing, and ascertaining steps, and optionally said reading, executing, and incrementing steps.

3. (previously presented) The method of claim 1, wherein said Concurrent Code Load includes (N) indicators, wherein each of said (N) indicators is assigned to a different one of said (N) phases, and wherein each of said (N) indicators can have a first value or a second value;

wherein said determining step further includes examining an (i)th indicator;

operative if said (i)th indicator is set to said first value, ascertaining that the (i)th phase of the Concurrent Code Load does not invoke the Temporal Coupling File; and

operative if the (i)th indicator is set to said second value, ascertaining that the (i)th phase of the Concurrent Code Load does invoke the Temporal Coupling File.

4. (previously presented) The method of claim 1, wherein said Concurrent Code Load comprises 10 phases.

5. (original) The method of claim 1, further comprising the steps of:

creating said existing code at a first time;

installing said existing code in said information storage and retrieval system at a second

time;

creating said Temporal Coupling File at a third time, wherein said third time is later than both said first time and said second time.

6. (previously presented) The method of claim 1, wherein said code update image comprises a (m)th code update, wherein said executing step includes determining if a (m-1)th code update has been installed.

7. (previously presented) The method of claim 6, further comprising the step of determining by said one or more processors if the (m-1)th code update has been installed;

wherein said Temporal Coupling File includes instructions which cause said one or more processors to determine if the (m-1)th code update has been installed.

8. (original) The method of claim 7, further comprising the step of generating an error message if the (m-1)th code update has not been installed.

9. (previously presented) The method of claim 1, wherein said information storage and retrieval system comprises one or more disk arrays and two or more clusters, wherein each of said two or more clusters includes, one of said one or more processors, one or more device adapters interconnected to said one or more disk arrays, and said existing code, and wherein said Concurrent Code Load includes quiescing I/O to a first one of said two or more clusters; said method further comprising the step of determining by a processor disposed in a first one of said two or more clusters if one or more device adapters disposed in a second one of said two or more clusters are operational before said processor disposed in said first one of said two or more clusters quiesces I/O to said first cluster;

wherein said Temporal Coupling File includes instructions which cause said processor

disposed in said first one of said two or more clusters to determine if one or more device adapters disposed in said second cluster are operational before quiescing I/O to said first cluster.

10. (original) The method of claim 9, further comprising the step of generating an error message if one or more device adapters disposed in said second cluster are not operational.

11. Canceled.

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